

REMARKS

Claims 1-17, 21, 27, 31-33, 36-39, 41, and 47-55 were pending. Claims 1-17, 31-33, 36-39, and 41 have been canceled. Claims 21 and 27 have been amended. No new matter has been introduced. Claims 21, 27, and 47-55 are currently pending.

Claims 21, 27, 47, 49, 53 and 55 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Kochi et al. (U.S. Patent No. 6,188,094). The rejection is respectfully traversed.

Independent claim 21 recites a light detecting system comprising an imager device having, *inter alia*, “a substrate having a plurality of photosensitive regions; and a substantially planar microlens array providing for a substantially planar imager device, said substantially planar microlens array formed over said plurality of photosensitive regions; said microlens array.” The microlens array comprises “a first light conductor having a plurality of concave recesses, and a second light conductor within each recess and over substantially planar surfaces formed between said concave recesses of said first light conductor.”

Independent claim 27 recites an integrated circuit comprising an imager device having “a substrate having a plurality of photosensitive regions; a microlens array formed over said plurality of photosensitive regions; said microlens array providing for a substantially planar imager device comprising; a first light conductor having a plurality of concave recesses, and a second light conductor within each recess and over said first light conductor, said second light conductor being coextensive with an adjacent second light conductor in at least a first plane and having a substantially planar surface.” The integrated circuit also includes “readout circuitry coupled to said plurality of photosensitive regions.”

Kochi is directed to a solid-state image pickup device. (Kochi, Abstract). Figure 1 of Kochi discloses a device having a semiconductor substrate 101, an insulating layer 103 formed on a photoelectric conversion element 102, an aluminum light-shielding portion 105 formed on top of the insulating layer 103, a leveling layer 107 and a microlens layer 108. (Kochi, FIG. 1; col. 1, lines 25-40).

Kochi fails to disclose, teach, or suggest each and every limitation of claim 21. Unlike the device of Kochi, the claimed invention, as shown in FIG. 4, has a “substantially

planar microlens array providing for a substantially planar imager device.” The advantage of the claimed invention is the elimination of a processing step for forming conventional circular microlenses that are formed by reflow and curing. *See* present application at ¶ [0007]. Kochi, on the other hand, specifically teaches using conventional circular microlenses that form a bubble (convex microlens 17 of Kochi’s FIG. 3A) over the photosensitive regions. Accordingly, Kochi’s convex microlenses 17 do not provide “for a substantially planar imager device,” as recited by claim 21.

Applicant respectfully requests that the rejection of independent claim 21 and dependent claims 47 and 49 be withdrawn and the claims allowed.

Claim 27 is also not anticipated by Kochi. As discussed above with respect to claim 21, Kochi’s convex microlenses 17 do not provide “for a substantially planar imager device.” Accordingly, Kochi fails to disclose, teach, or suggest a “microlens array providing for a substantially planar imager device,” as recited by claim 27.

Applicant respectfully requests that the rejection of independent claim 27 and dependent claims 53 and 55 be withdrawn and the claims allowed.

Claims 48, 50, and 54 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over figure 1 of Kochi in view of figure 3A of Kochi. Applicant respectfully traverses the rejection.

Claims 48 and 50 depend from claim 21, and are allowable over Kochi for at least the reasons set forth above with respect to claim 21 and on their own merits.

Claim 54 depends from claim 27, and is allowable over Kochi for at least the reasons set forth above with respect to claim 27 and on its own merit.

Applicant respectfully requests that the rejection of dependent claims 48, 50, and 54 be withdrawn and the claims allowed.

Claim 51 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Kochi in view of alleged Acknowledged Prior Art (“APA”). Applicant respectfully traverses the rejection.

Claim 51 depends from claim 21, and is allowable over Kochi for at least the reasons set forth above with respect to claim 21 and on its own merit. The APA, cited as allegedly teaching a color filter formed below the first light conductor, fails to teach or suggest "a substantially planar imager device."

Accordingly, Applicant respectfully requests that the rejection of dependent claim 51 be withdrawn and the claim allowed.

Claim 52 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Kochi. Applicant respectfully traverses the rejection.

Claim 52 depends from claim 21, and is allowable over Kochi for at least the reasons set forth above with respect to claim 21 and on its own merit.

Applicant respectfully requests that the rejection of dependent claim 52 be withdrawn and the claim allowed.

In view of the above, Applicant believes the pending application is in condition for allowance.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 04-1073, under Order No. M4065.0735/P735.

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Respectfully submitted,

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